

## **REMARKS**

The Examiner's indications in items 1 and 2 on page 2 of the February 27, 2003 Office Action that the Abstract and substitute specification have been entered, is appreciated. Also, the Examiner's indications in items 4-8 on page 2 of the Office Action that the various objections and rejections have been withdrawn is also appreciated.

In item 9 on page 3 of the Office Action, claims 28, 30, 37 and 41 were rejected under 35 U.S.C. 112, second paragraph, as being indefinite. In this regard, the Examiner rejected claims 28 and 37 for inclusion of the phrase "in a folded-over relation with". Accordingly, these phrases have been amended so that the claims 28 and 37 now recite that "said noncombustible joint member has opposing side edges that are folded-over said axially extending portions, respectively, of said flanges of the adjacent turns of said elongated strip." It is submitted that this new language is definite within the meaning of 35 U.S.C. 112, second paragraph, and clarifies the structure of the invention.

Next, the Examiner indicated that the phrase "flanges project toward the interior" in claims 30 and 41 was indefinite. Accordingly, claim 30 has been amended to recite that the flanges "project into the interior of said tubular duct", and claim 41 has been amended to recite that the flanges project "into an interior of said tubular duct."

Also in claim 41, the Examiner objected to the phrase "said flanges" as lacking proper antecedent basis. This problem has also been addressed by the amendment to claim 41.

It is submitted that the claims as now amended clearly comport with the requirements of 35 U.S.C. 112, second paragraph.

In items 10-14 on pages 3-12 of the Office Action, prior art rejections were presented against the claims on the basis of Parrott et al., Clarke, Yamaguchi et al., Berdan, II and Hinden et al. These rejections are respectfully traversed in part, and it is respectfully submitted that these rejections are clearly inapplicable to the claims as now presented, for the following reasons.

Each of the independent claims has now been amended to specify that the noncombustible insulating duct comprises an elongated strip formed of an insulating material 2 and a

noncombustible sheet 3, wherein the noncombustible sheet 3 is disposed continuously about a circumference of the insulating material 2 so as to completely encase the insulating material 2 when viewed in longitudinal cross section (as shown in present Figs. 1-4).

This now-recited feature of the present invention clearly distinguishes the present invention over the prior art. The Parrott reference discloses insulating material 7 and noncombustible sheet 9, as indicated by the Examiner. However, as can be clearly seen from the drawing figures (e.g. Fig. 3) of the Parrott reference, the noncombustible sheets 9 are not "disposed continuously about a circumference of the insulating material" so as to completely encase the insulating material when viewed in longitudinal cross section, as required by each of the independent claims 15, 22 and 31. Rather, the noncombustible sheets 9 of the Parrott reference are merely bonded to upper and lower surfaces of the insulating material 7, leaving exposed the end edges (having reference numeral 39 pointing thereto) remaining exposed, for example.

For this reason, the arrangement of the Parrott structure requires that a separate corner section 11 be provided. This structure of Parrott is incompatible with the concept of a spiral winding of an elongated strip formed of an insulating material and a noncombustible sheet so as to form a noncombustible insulating duct, such as that of the present invention.

Thus, it is believed clear that the Parrott reference fails to disclose or suggest the present invention having the elongated strip formed of an insulating material and a noncombustible sheet, wherein the noncombustible sheet is disposed continuously about a circumference of the insulating material so as to completely encase the insulating material when viewed in longitudinal cross section. Further, as recognized by the Examiner, the Parrott reference fails to disclose or suggest such an elongated strip arranged in a spiral shape having a plurality of turns.

It is further submitted that the Clarke, Yamaguchi et al., Berdan, II and Hinden et al. references provide no teaching or suggestion that would have obviated the above-discussed shortcomings of the Parrott reference. Therefore, it is respectfully submitted that a person having ordinary skill in the art would clearly not have been motivated to modify the Parrott reference in

such a manner as to result in or otherwise render obvious the present invention of claims 15, 22 and 31. Therefore, it is respectfully submitted that claims 15, 22 and 31, as well as the claims depending therefrom, are clearly allowable over the prior art of record.

The Examiner's attention is also directed to the dependent claims which set forth additional features of the present invention and further define the invention over the prior art. For example, the Examiner's attention is specifically directed to dependent claims 41 and 42 that specify that the elongated strip has flanges 4 projecting from first and second sides thereof into an interior of the tubular duct, the noncombustible joint member is engaged with the flanges 4, and the flanges and the noncombustible joint member are disposed in the interior of the tubular duct.

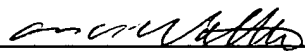
Attached hereto is a marked-up version of the changes made to the specification by the current amendment. The attachment is captioned "**Version with markings to show changes made.**"

In view of the foregoing amendments and remarks, it is respectfully submitted that the present application is clearly in condition for allowance. An early notice thereof is earnestly solicited.

If, after reviewing this Amendment, the Examiner feels there are any issues remaining which must be resolved before the application can be passed to issue, it is respectfully requested that the Examiner contact the undersigned by telephone in order to resolve such issues.

Respectfully submitted,

Kouki FUKUI

By:   
Charles R. Watts  
Registration No. 33,142  
Attorney for Applicant

CRW/asd  
Washington, D.C. 20006-1021  
Telephone (202) 721-8200  
Facsimile (202) 721-8250  
May 27, 2003



15. (Amended) A noncombustible insulating duct comprising:  
an elongated strip formed of an insulating material and a noncombustible sheet,  
wherein said noncombustible sheet is disposed continuously about a circumference of said  
insulating material so as to completely encase ~~encasing~~ said insulating material when viewed in  
longitudinal cross section;  
wherein said elongated strip is arranged in a spiral shape having a plurality of turns;  
wherein adjacent turns of said plurality of turns of said spiral shape are secured  
together by a bonding agent so as to form a tubular duct; and  
wherein said tubular duct is noncombustible.
22. (Amended) A noncombustible insulating duct comprising:  
an elongated strip formed of an insulating material and a noncombustible sheet,  
wherein said noncombustible sheet is disposed continuously about a circumference of said  
insulating material so as to completely encase ~~encasing~~ said insulating material when viewed in  
longitudinal cross section;  
wherein said elongated strip is arranged in a spiral shape having a plurality of turns;  
wherein adjacent turns of said plurality of turns of said spiral shape are secured  
together by a noncombustible joint member so as to form a tubular duct; and  
wherein said tubular duct is noncombustible.
28. (Amended) A noncombustible insulating duct according to claim 27, wherein  
said flanges include axially-extending portions extending in axial directions of said  
tubular duct; and  
said noncombustible joint member has opposing side edges that are ~~in a~~ folded-  
over ~~relation with~~ said axially extending portions, respectively, of said flanges of the adjacent turns  
of said elongated strip.
30. (Amended) A noncombustible insulating duct according to claim 28, wherein  
said flanges project toward into the interior of said tubular duct, and said

noncombustible joint member ~~is~~ are disposed in the interior of said tubular duct.

31. (Amended) A noncombustible insulating duct comprising:

an elongated strip formed of an insulating material and a noncombustible sheet,  
wherein said noncombustible sheet is disposed continuously about a circumference of said  
insulating material so as to completely encase encasing said insulating material when viewed in  
longitudinal cross section;

wherein said elongated strip is arranged in a spiral shape having a plurality of turns;

wherein adjacent turns of said plurality of turns of said spiral shape are secured  
together by both a bonding agent and a noncombustible joint member so as to form a tubular duct;  
and

wherein said tubular duct is noncombustible.

37. (Amended) A noncombustible insulating duct according to claim 36, wherein

said flanges include axially-extending portions extending in axial directions of said  
tubular duct; and

said noncombustible joint member has opposing side edges that are ~~in a~~ folded-  
over ~~relation with~~ said axially extending portions, respectively, of said flanges of the adjacent  
turns of said elongated strip.

41. (Amended) A noncombustible insulating duct according to claim 31, wherein

~~said flanges project toward the~~ said elongated strip has flanges projecting from first  
and second sides thereof into an interior of said tubular duct, said noncombustible joint member is  
engaged with said flanges, and said flanges and said noncombustible joint member ~~is~~ are disposed  
in the interior of said tubular duct.